



Fairhaven, MA Broadband Feasibility Study Kickoff Broadband Study Committee

September 17, 2019

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Kickoff Meeting Agenda

- Introductions
- Broadband Value Assumption/Purpose of Feasibility Study
- Community Broadband Success Factors
- Feasibility Study Requirements Review
- Possible RFP Respondents
- Proposed Schedule
- Questions
- Next Steps
- Reference Sources
- Contact Information



Broadband Value Assumption/Purpose of Feasibility Study

- Fairhaven Broadband Study Committee understands the value of pursuing the goal of developing a plan to provide the town with broadband infrastructure.
- The purpose of the broadband feasibility study is to develop an actionable tactical plan for the town of Fairhaven that support three key criteria:
 - Affordable
 - Accessible
 - Adopted

Community Broadband Success Factors

Inclusive Community Engagement and Education

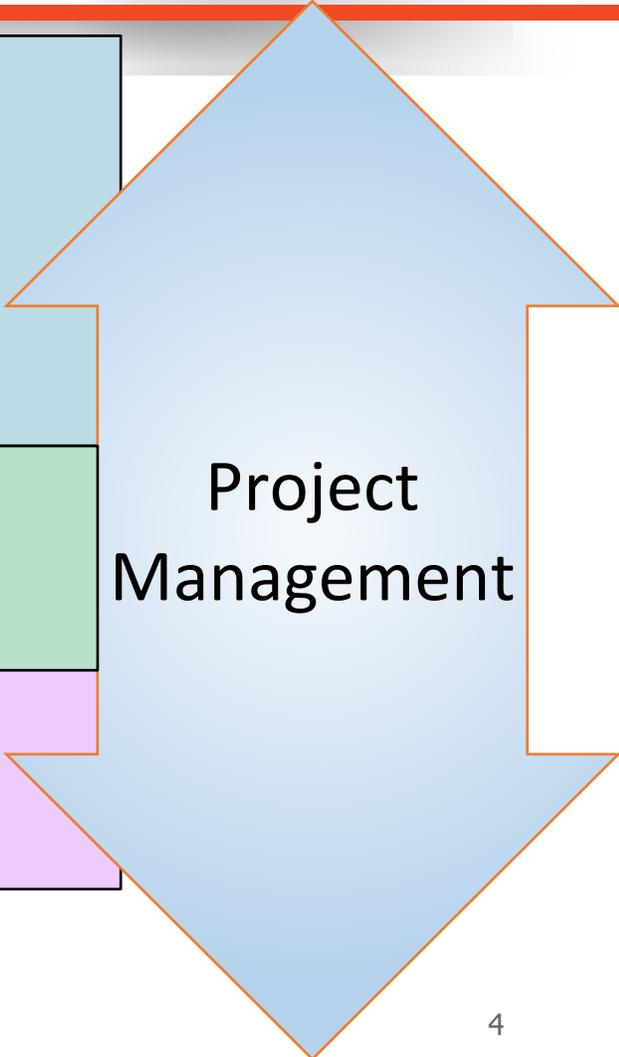
- Involvement of residents/user sectors in planning and community advocacy
- Shared understanding of Broadband as a community infrastructure & quality of life benefits

Strategic Thinking/Planning

Community-wide strategic thinking for successful Broadband access & use

Tactical Planning/Actions

Actions to effectively accomplish strategies



Project Management

Broadband Feasibility Study Requirements

PROJECT FEASIBILITY REPORT

- Demand for broadband service
- Education/community engagement plan
- Engineering designs option(s) for broadband infrastructure
- Control/risk analysis of broadband models
- Operations plan options
- Financing options
- Pro forma analysis of broadband models
- Potential last-mile service providers
- Marketing plan
- Governance plan
- Implementation plan
- Project plan/schedule
- Additional information required

Demand for broadband service requirement

- What: RFP will require respondents to determine demand for affordable and accessible broadband service
- This requirement can also be expanded to require respondents to sample actual broadband speed and ping provided by incumbent providers
- Example of advertised speeds:
 - Ixfinity – highest speed – 200 Mbps available to 99.2% of residents*
 - Verizon fiber – highest speed – 150 Mbps available to .1% of residents*
 - Verizon DSL – highest speed – 15 Mbps available to 96.5% of residents*

*Sample would need to include both upload and down load speeds and ping (minimum time to send the smallest amount of data and receive a response)
- Recommendation
 - Include
 - Not include
- Weight - ?

Education/community engagement plan requirement

- What: RFP will request respondents to develop an education/community engagement plan
 - Develop materials that can be used to educate and engage the public about the benefits of broadband that can be used for multiple communications channels, i.e., townhall meetings, social media, government website
- Recommendation
 - Include
 - Not include
- Weight - ?

Engineering designs option(s) for broadband infrastructure requirement

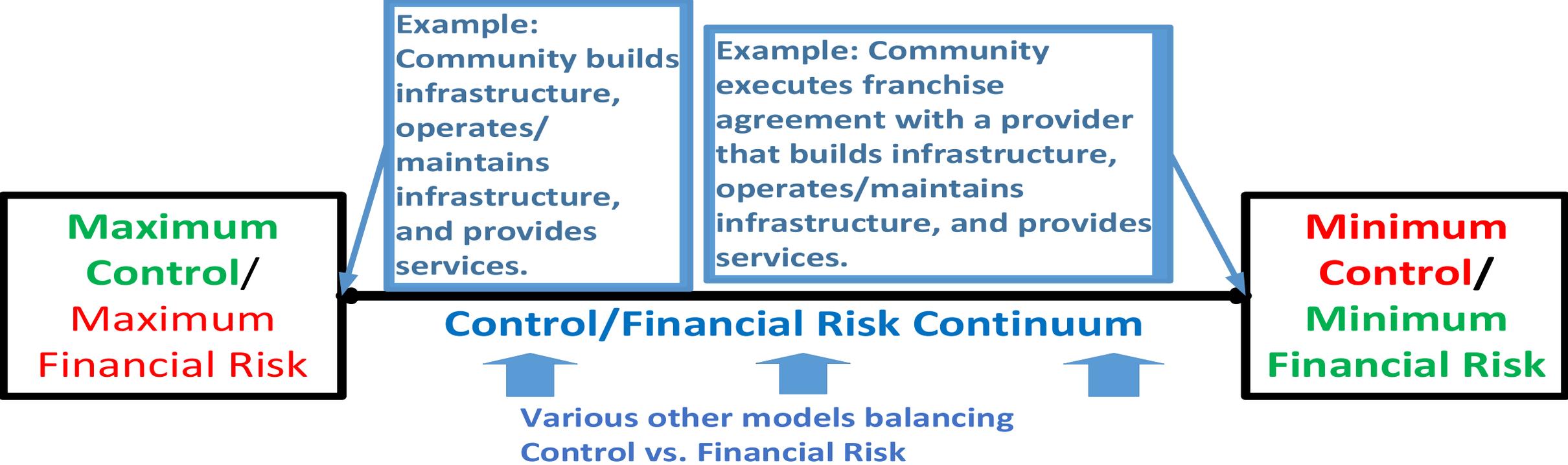
- What: RFP will request respondents to develop a high-level network design that leverages Fairhaven's fiber optic municipal area network to build the last mile (FTTx) network.
- Possible options:
 - Gigabit Passive Optic Network (GPON) - **point-to-multipoint access network**. Its main characteristic is the use of passive splitters in the fiber distribution network, enabling one single feeding fiber from the provider to serve multiple homes and small businesses.
 - Active Ethernet (AON) - An active network is a network in which the nodes are programmed to perform custom operations on the messages that pass through the node. For example, a node could be programmed or customized to handle packets on an individual user basis or to handle multicast packets differently than other packets. Active network approaches are expected to be especially important in networks of mobile users. "Smart packets" use a special self-describing language that allows new kinds of information to be carried within a packet and operated on by a node. **Preferred design for software controlled open access network such as EntryPoint.**
 - Fixed wireless – designed for areas where it is not economically feasible to deploy last mile fiber.
 - Considers capital cost for construction of network – OSP materials, electronics, make ready, labor.
- Recommendation
 - ✓ Include
- Weight - ?

Control, Risk, Benefit

Interwoven Issues

1. Control – who owns the network and decides how it operates
2. Risk – the investment associated with developing and running the network balanced against revenue generated
3. Benefit – rewards (social, economic, political) achieved through successful implementation of the project

Community Control/Financial Risk/Benefit Continuum



Stakeholder Benefits – Affordability and Access

Control/risk analysis of broadband models requirement

- What: RFP will require respondents to provide a control/financial risk analysis of model(s) recommended
- Recommendation
 - Include
 - Not include
- Weight - ?

Potential last-mile service providers requirement

- What: RFP will require respondents to contact and identify potential last mile providers including incumbents.
- This requirement will include identifying potential partnership between private companies and public private partnerships.
- Recommendation
 - Include
 - Not include
- Weight - ?

Financing option requirements

- What: RFP will require respondents to identify potential capital funding options.
- Examples:
 - Rural Utilities Services (RUS) grants/low interest loans
 - Connect America Fund (CAF) grants/low interest loans
 - Bond options
 - Tax options
- Recommendation
 - ✓ Include if required
- Weight - ?

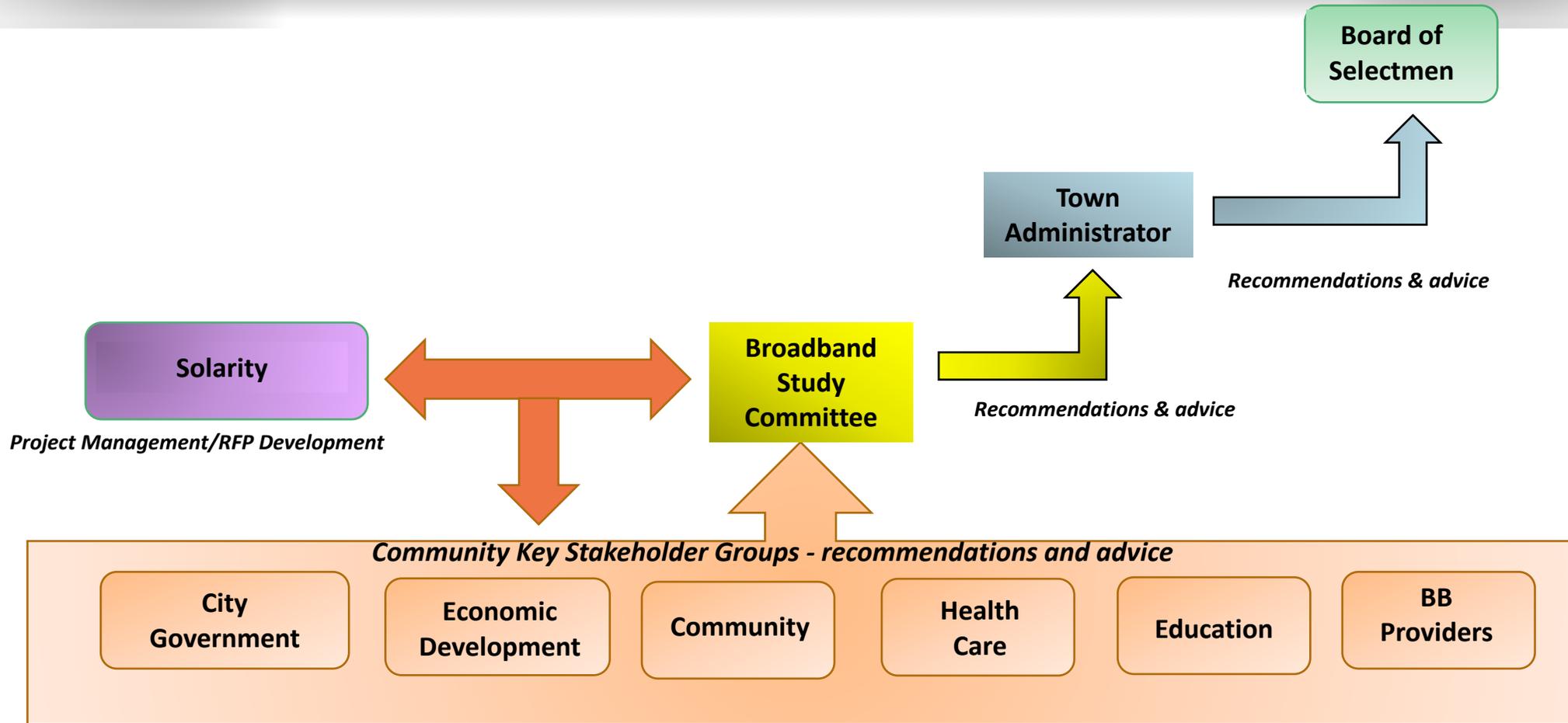
Operations plan options requirement

- What: RFP will require respondents to analyze possible operations/maintenance models (if municipal model(s) recommended)
- Examples
 - Customer service, account management, billing
 - Operations/Maintenance – government employees vs contract, maintenance equipment and tools
 - Electronics refresh
 - Marketing
- Recommendation
 - ✓ Include if required
- Weight - ?

Pro forma analysis of broadband model(s) requirement

- What: RFP will require respondent to develop a pro forma analysis for each broadband model(s) recommended.
- Examples:
 - Operations/maintenance cost
 - Revenue based on services offered (broadband, cable, telephone) and take rate estimate
 - Debt service
- Recommendation
 - ✓ Include
- Weight - ?

Governance & Organizational Structure



Governance plan requirement

- What: RFP will require respondents to recommend governance plan for municipal model(s) recommendation
- Recommendation
 - ✓ Include if required
- Weight - ?

Marketing plan requirement

- What: RFP will require respondents to recommend a marketing plan for municipal model(s) recommendation
- Recommendation
 - ✓ Include if required
- Weight - ?

Implementation plan requirement

- **What:** RFP will require respondents to recommend implementation plan for municipal model(s) recommendation
- **Example:**
 - How to approach last mile infrastructure construction, i.e. phased, anchor institutions, rural area approach?
- **Recommendation**
 - ✓ **Include if required**
- **Weight - ?**

Project plan/schedule requirement

- What: RFP will require respondents to provide a high-level project plan and schedule for feasibility study delivery.
- Examples
 - Requirements = deliverables
 - Milestone schedule
- Recommendation
 - ✓ Include
- Weight - ?

Additional information required

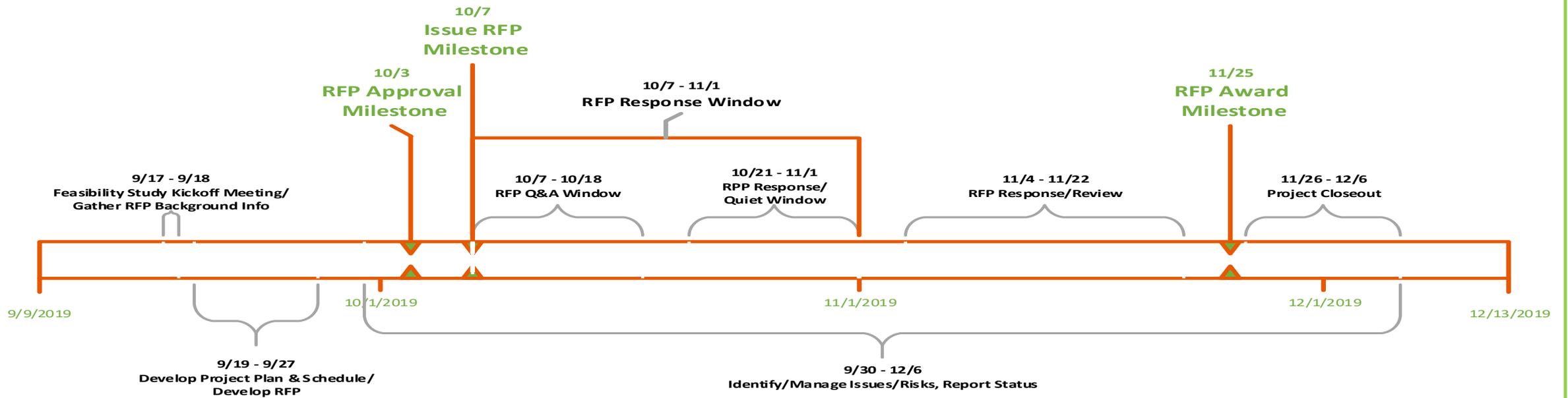
- Overview of lead company and identification of partners/contractors that will be working on the project.
 - 3 year financial summary
- Experience performing broadband feasibility studies or similar types of broadband projects.
 - References
- Resumes or profiles of key individuals that will be working on the project.

Additional information required

- Fairhaven RFP template requirements:
 - Affirmative Action/Equal Opportunity
 - Minority owned businesses
 - In-state labor resources
 - Non-Appropriation clause
 - Contention process
 - General provisions

Possible RFP Respondents

- TriWire Engineering Solutions
- Finley Engineering



**Fairhaven, MA Broadband Feasibility Study Proposed Schedule
September 17, 2019**

Questions?



Next Steps



- Broadband Feasibility Study RFP Draft Complete – 9/27/19
- Fairhaven Broadband Study Committee – 10/3/19 Review/Approve Broadband Feasibility Study RFP
- Release Broadband Feasibility Study RFP – 10/7/19

Broadband Planning *Resources & References*



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- **Broadband Community Primer**
- **Solarity Broadband Glossary** www.solarity.com/broadband-terminology
- **Solarity Resource Guide** <https://solarity.com/services/community-broadband-success/broadband-resource-guide/>
- **Other U.S. Community Networks Advocates and Support**
 - FTTH (Fiber to the Home) Council Americas: www.ftthcouncil.org
 - **Broadband Communities Magazine:** www.bbpmag.com
 - Community Broadband News: www.MuniNetworks.org
 - Rural Telecommunications Congress: www.ruraltelecon.org
 - **Next Century Cities:** www.nextcenturycities.org
 - CLIC (Coalition for Local Internet Choice): www.localnetchoice.org
 - US Conference of Mayors: www.usmayors.org

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